

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-5. (Cancelled)

6. (Currently Amended) The central venous catheter shaft according to claim [[4]] 26, wherein the durometer of the polymer material contained in the transition tube segment continuously decreases from the first durometer at a proximal end of the transition tube segment to the second durometer at a distal end of the transition tube segment with no abrupt durometer shift.

7. (Currently Amended) The central venous catheter shaft according to claim [[1]] 30, wherein the transition segment contains a radiopaque filler and the percentage by weight of the filler contained in the transition tube segment continuously varies over the length of the transition tube segment.

8. (Currently Amended) The central venous catheter shaft according to claim [[7]] 34, wherein the percentage by weight of the filler contained in the transition tube segment continuously increases from a proximal end of the transition tube segment to a distal end of the transition tube segment.

9. (Currently Amended) The central venous catheter shaft according to claim [[1]] 26, wherein the proximal, distal and transition tube segments together define a single tube and the single tube contains one or more lumens.

10-22. (Cancelled)

23. (Currently Amended) The central venous catheter shaft according to claim [[1]] 26, further comprising a hub component attached to a proximal end of the proximal tube segment and adapted to remain outside of a patient body.

24-25. (Cancelled)

26. (New) A central venous indwelling catheter shaft comprising:

a proximal tube segment containing a first polymer material of a first durometer;

a distal tube segment containing a second polymer material of a second durometer, the proximal tube segment being stiffer than the distal tube segment; and

a transition tube segment interposed between the proximal tube segment and the distal tube segment; and

wherein the transition tube segment is composed of both the first polymer material and the second polymer material; and

wherein the amount of second polymer material of the transition tube segment continuously decreases from the distal tube segment to the proximal tube segment and the amount of the first polymer material continuously increases from the distal tube segment to the proximal tube segment and the durometer of the polymer material contained in the transition tube segment continuously decreases from the proximal end of the transition tube segment to the distal end of the transition tube segment; and

wherein said catheter shaft is of non-reinforced single layer unitary construction, the proximal, distal and transition tube segments together defining a single integrally formed tube.

27. (New) The catheter shaft of Claim 26, wherein the transition segment has greater flexibility than the proximal segment and wherein the flexibility within the transition segment continuously varies from less flexible at the proximal end to more flexible at the distal end.

28. (New) The catheter shaft of Claim 26, wherein the distal segment is more flexible than the transition segment and is substantially more flexible than the proximal segment.

29. (New) The catheter shaft of claim 26 wherein the proximal tube segment contains a first amount of radiopaque filler and the distal tube segment contains a second amount of radiopaque filler.
30. (New) The catheter shaft according to Claim 26, wherein the proximal segment contains a range of from about 0 to about 30% radiopaque filler by weight and the distal segment contains an amount of radiopaque filler from about 30 to about 50% by weight.
31. (New) The catheter shaft of Claim 26, which exhibits a high burst strength.
32. (New) The catheter shaft of Claim 31, which can withstand injection pressures from between about 100 psi to about 300 psi without bursting.
33. (New) The catheter shaft of claim 26 wherein the proximal segment can withstand higher pressures than the distal segment.
34. (New) The central venous catheter shaft of claim 26 wherein the transition tube segment contains a radiopaque filler and the percentage by weight of the filler contained therein continuously varies over the length of the transition tube segment.
35. (New) The catheter shaft of claim 26 wherein the majority of the shaft consists of the transition segment.
36. (New) The catheter shaft of claim 26 wherein the length of the transition segment is short relative to the length of the distal segment and the length of the proximal segment.